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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/650,918	08/29/2003	Yasushi Ikeda	0425-1076P	7977

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EXAMINER	
WEBB, GREGORY E	

ART UNIT	PAPER NUMBER
1796	

NOTIFICATION DATE	DELIVERY MODE
11/07/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No.	Applicant(s)	
	10/650,918	IKEDA ET AL.	
	Examiner	Art Unit	
	Gregory E. Webb	1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 August 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2-4 and 9-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2-4 and 9-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, filed 8/14/08, with respect to the rejection of claims have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new grounds of rejection are made.

Claim Rejections - 35 USC § 102

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 2-4, and 9-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Urushibata et al (US 5,304,316).

Concerning the deinking agent and the process of forming the agent, Urushibata, Hideaki teaches the following:

Claims What is claimed is: 1. A **deinking** agent for regenerating waste paper, which comprises a reaction product obtained by reacting (a) a compound having an OH group, which is represented by the following compound (A) or incomplete ester (B) or a mixture thereof, with (b) a dicarboxylic acid or an anhydride thereof as an active ingredient, wherein said dicarboxylic acid anhydride is selected from the group consisting of maleic anhydride, succinic anhydride, glutaric anhydride and phthalic anhydride and approximately 1 mole of said dicarboxylic acid is used per residual OH group of

compound (A) or incomplete ester (B):

Concerning the degree of esterification, Urushibata, Hideaki teaches the following:

The incomplete ester (B) may be obtained by adding an alkylene oxide (for example, ethylene oxide, propylene oxide) to the polyhydric alcohol and then esterifying the obtained product with a higher fatty acid. Alternately, it may be obtained by, for example, adding an alkylene oxide to a mixture of a fat and a polyhydric alcohol; or esterifying a polyhydric alcohol with a higher fatty acid and then adding an alkylene oxide thereto. The **degree of esterification** of the incomplete ester may range from 30 to 90%, preferably from 50 to 75%. When the degree of esterification thereof is less than 30%, the liberation of the ink from cellulose becomes difficult and, as a result, there remains a large amount of unliberated ink. When the degree of esterification exceeds 90%, on the other hand, the ability of collecting the ink in the flotator is deteriorated and, as a result, the degree of whiteness of the resulting deinked pulp is lowered.

Concerning the trihydric alcohol and the number of moles of alkylene oxide, Urushibata, Hideaki teaches the following:

(B) an incomplete ester of a **polyhydric alcohol**, said polyhydric alcohol is selected from the group consisting of ethylene glycol, propylene glycol, glycerol, diglycerol, triglycerol, trimethylolpropane, pentaerythritol and sorbitol, to which ethylene oxide and

propylene oxide have been added in such a manner as to control the molar ratio of ethylene oxide/propylene oxide to from 1 to 4 and to control the total amount of the added **ethylene oxide and propylene oxide to from 10 to 50 moles per OH group on average**, and a higher fatty acid having 8 to 22 carbon atoms,

Concerning the specific exemplified fatty acid ester, Urushibata, Hideaki teaches the following (noting the argued AO=EO+PO):

Specific and non-limitative examples of the compound (A) include, for example, POE/POP glycol monostearate (EO p=20 mole, PO p=10 mole, block), POE/POP glycol monooleate (EO p=25 mole, PO p=20 mole, random), POE/POP glycol monolaurate (EO p=10 mole, PO p=8 mole, random), POE/POP glycol monomyristate (EO p=25 mole, PO p=25 mole, random), POE/POP glycol monopalmitate (EO p=40 mole, PO p=10 mole, block), POE/POP glycol monoelaidate (EO p=10 mole, PO p=3 mole, block), POE/POP glycol monolinolate (EO p=15 mole, PO p=5 mole, block), POE/POP glycol mono tallow oil fatty acid ester (EO p=30 mole, PO p=20 mole, block), POE/POP glycol mono tallow oil half-hydrogenated fatty acid ester (EO p=20 mole, PO p=15 mole, block), POE/POP glycol mono tallow oil hydrogenated fatty acid ester (EO p=12 mole, PO p=12 mole, block), POE/POP glycol monococonut oil fatty acid ester (EO p=36 mole, PO p=14 mole, block), POE/POP glycol monopalm oil fatty acid ester (EO p=16 mole, PO p=16 mole, random).

4. Claims 2-4, and 9-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Ishibashi et al (US 5,302,243).

Concerning the deinking, alkylene oxide, fatty acid, polyhydric alcohol, and carboxylic acid, Ishibashi, Yoichi teaches the following:

11. The method for **deinking** waste paper as claimed in claim 1, wherein said deinking composition further comprises an additional deinking component selected from the group consisting of a higher alcohol sulfate, an alkylbenzenesulfonate, an alkylene oxide adduct of a higher alcohol, an alkylene oxide adduct of an alkylphenol, a fatty acid or salt thereof, an alkylene oxide adduct of a fatty acid, an alkylene oxide adduct of a fat and oil, an alkylene oxide adduct of monostearylglyceride, an alkylene oxide adduct of polyhydric alcohol partial or complete esters, and mixtures thereof.

Concerning the esterifying, and transesterification, Ishibashi, Yoichi teaches the following:

3. The method for **deinking** waste paper as claimed in claim 2, wherein said mixture (I) or said **transesterification** mixture (II) or both is prepared by using a fat and/or oil (a) and a mono- to hexahydric alcohol (b) at a molar ratio of (b) to (a) of from 0.1 to 0.5.

Concerning the EO addition, Ishibashi, Yoichi teaches the following:

When a deinking composition comprising a deinking agent as an effective component, having the molar number of **EO addition** per mole of the fat and oil (a) in the mixture (I) and/or the fat and oil (a) employed for preparing transesterification mixture (II) outside the range of from **50 to 100 mol** is used, the deinked pulp obtained is contaminated with a large amount of unliberated ink. Thus it is difficult in this case to obtain a deinked pulp having a high b value and a good appearance. In particular, when a deinking composition comprising a deinking agent, as an effective component, wherein an average molar number of **EO addition exceeding 100 mol** is used, the disadvantage that the ink is dispersed is added.

Concerning the trihydric alcohol, Ishibashi, Yoichi teaches the following:

As the tri- to hexahydric alcohols, those having 3 to 24 carbon atoms are preferable. Specific examples thereof include glycerol, erythrose, erythrulose, erythritol, threose, pentaerythritol, diglycerol, arabinose, xylose, xylulose, deoxyribose, lyxose, ribulose, ribose, arabitol, ribitol, altrose, allose, galactose, gulose, mannose, glycitol, inositol, mannitol, sorbitol and tetraglycerol.

5. Claims 2-4, and 9-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Ikeda et al (US 6,346,169).

Concerning the degree of esterification, polyhydric alcohol, and fatty acid ester, Ikeda, Yasushi teaches the following:

Examples of the nonionic surfactants based on a sugar alcohol (2) include sugar alcohol/AO adducts, fatty acid esters of sugar alcohol/AO adducts, and fatty acid esters of sugar alcohols. The sugar alcohol as a component of a nonionic surfactant based on a polyhydric alcohol is an alcohol obtained from a monosaccharide having 3 to 6 carbon atoms through reduction of the aldehyde or ketone group. Examples thereof include glycerol, erythritol, arabitol, sorbitol, and mannitol. Especially preferred are those having 6 carbon atoms. The fatty acid as a component of the fatty acid ester in a sugar alcohol/AO adduct may be any of saturated and unsaturated fatty acids each having 1 to 24, preferably 12 to 18, carbon atoms. Preferred is oleic acid. With respect to the degree of esterification of the sugar alcohol, the number of OH groups which have undergone esterification may be any of from zero to all of the OH groups. However, the degree of esterification is preferably 1 to 3. The kinds of AO and the average number of moles of AO added are the same as in (1).

Concerning the alkylene oxide, and synthesis, Ikeda, Yasushi teaches the following:

Examples of the nonionic surfactants based on a fat (1) include ones obtained by mixing

an alcohol having 1 to 14 hydroxy groups with a fat such as those given in, e.g., JP-A 4-352891 or with a product of the reaction of the fat with glycerol and causing the mixture to add an alkylene oxide (AO). Preferred is one obtained by causing a mixture of a fat and a polyhydric alcohol to add an AO. The AO is ethylene oxide (EO) and/or propylene oxide (PO). In the case of using both EO and PO, the EO/PO polymer may have any of random and block arrangements. **The average number of moles of EO added is preferably 0 to 200**, more preferably 10 to 100, while that of PO added is preferably 0 to 150, more preferably 2 to 100.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory E. Webb whose telephone number is 571-272-1325. The examiner can normally be reached on 9:00-17:30 (m-f).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Gregory E. Webb/
Primary Examiner, Art Unit 1796

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Art Unit 1796

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